

Notice of Allowability

Application No.

10/808,177

Examiner

Fred I. Ehichioya

Applicant(s)

JARDIN, CARY A.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/23/2004.
2. ☒ The allowed claim(s) is/are 1 - 7, 10 - 16 and 19 - 25 (renumbered 1 - 21).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 09/27/06.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



**SHAHID ALAM
PRIMARY EXAMINER**

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 7, 10 – 16 and 19 – 25 are drawn to storing first portion of first table and storing first portion of second table in first node, determining a join table definition in response to a query command, generating a join table, generating first intermediate result file, second intermediate result file and a final result from first intermediate result file and second intermediate result file, classified in class 707, subclass 100.
 - II. Claims 8 – 9 and 17 – 18 are drawn to receiving a database query command, generating a first portion of a result file, a second portion of a result file; and executing post-processing operations on said results file to remove duplicate matching records, classified in class 707, subclass 6

The inventions are distinct, each from the other because of the following reasons: Inventions listed as Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention has separate utility as follows:

Group I has separate utility such as storing first portion of first table and storing first portion of second table in first node, determining a join table definition in response to a query command, generating a join table, generating first intermediate result file,

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second intermediate result file and a final result from first intermediate result file and second intermediate result file.

Group II has separate utility such as a database query command, generating a first portion of a result file, a second portion of a result file; and executing post-processing operations on said results file to remove duplicate matching records. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

During telephone conversation with Richard E. Campbell (Reg. No. 27,189) applicant's representatives, on September 27, 2006 a provisional election was made without traverse to prosecute the invention of Group I, Claims 1 – 7, 10 – 16 and 19 – 25. Claims 8 – 9 and 17 - 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Examiner's Amendment

2. During telephone conversation with Richard E. Campbell (Reg. No. 27,189), on September 27, 2006, Mr. Campbell authorizes for this Examiner's amendment.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the claims:

Please cancel claims 8 - 9 and 17 - 18

In the Specification:

"Related Application"

Paragraph [0001], line 7 after "Patent Application No." insert "10/807,816"

Paragraph [0001], line 7, Please delete "Attorney Docket No. XP.001CP1"

Paragraph [0001], line 9 after "Patent Application No." insert "10/808,199"

Paragraph [0001], line 9, Please delete "Attorney Docket No. XP.002CP1"

Paragraph [0001], line 11 after "Patent Application No." insert "10/808,176"

Paragraph [0001], line 11, Please delete "Attorney Docket No. XP.002CP2"

Paragraph [0001], line 13 after "Patent Application No." insert "10/808,175"

Paragraph [0001], line 13, Please delete "Attorney Docket No. XP.002CP4"

Allowable Subject Matter

3. Claims 1 – 7, 10 – 16 AND 19 - 25 (renumbered 1 – 21) are allowed over the prior art of record.

The following is an examiner's statement of reasons for allowance:

Bayliss et al. discloses parallel processing of queries to one or more distributed subset of slave nodes but singularly or in combination, fail to anticipate or render obvious the recited feature "a query command in a distributed computing system in which a plurality of database tables are stored on a plurality of nodes, different portions of at least one database table being stored on at least two of the nodes".

Tanar et al. discloses aggregate-join queries in which tables are joined to produced a single table which becomes an input to the group-by in query processing operation but singularly or in combination, fail to anticipate or render obvious the recited feature "a query command in a distributed computing system in which a plurality of database tables are stored on a plurality of nodes".

Hsu et al. discloses storing and updating information in a first table corresponding to specific nodes of a network by indexing the table with truncated, or hashed, forms of the node addresses, and using the results of previous reads of

portions of the indexed addresses to reduce the number of future reads necessary for locating the indexed addresses and updating the table entries but singularly or in combination, fail to anticipate or render obvious the recited feature “storing a first portion of a first database table and a first portion of a second database table on a first node, and storing a second portion of a first database table and a second portion of a second database table on a second node; determining a join table definition in response to a query command, said join table definition identifying a subset of said first database table to include in executing said database query command”.

Cohen discloses storing rows of a first table in a first storage module, storing rows of a second table in a second storage module, and receiving a request to perform a join of the first and second tables. Rows and one or more columns of the rows of the first table are distributed, in response to the join request, from the first storage module to the second storage module, and row identifiers of the distributed rows are sent with the distributed rows but singularly or in combination, fail to anticipate or render obvious the recited feature “determining a join table definition in response to a query command, said join table definition identifying a subset of said first database table to include in executing said database query command”.

Parthasarthy et al. discloses storing instruction from a patch table into patch buffer and storing a second replacement cache line from the patch buffer; Day et al discloses a dynamic join reordering feature to change the order of two or more join operations while a query is executing. A database engine starts execution of the query with an initial join order setting but monitors the execution of the query to determine whether the initial join order or some other join order would provide better runtime performance but either Parthasarthy or Day singularly or in any other combination, fail to anticipate or render obvious the recited feature “generating a first join table from said first portion of said first database table in accordance with said join table definition, and generating a second join table from said second portion of said first database table in accordance with said join table definition”.

Hadar et al. discloses comparing first and second portion and providing a change notification if the first and second portions are not identical but singularly or in

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combination, fail to anticipate or render obvious the recited feature "comparing said first portion of said second database table with said second join table, and comparing said second portion of said second database table with said first join table to generate a second intermediate results file".

Therefore, these prior arts of record fail to anticipate or render obvious applicant's claim limitations.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 571-272-4034. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred I. Ehichioya
Patent Examiner
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October 2, 2006



SHAHID ALAM
PRIMARY EXAMINER